

General Information

Instructor	Eric Miers
Email	eric.miers.15@cnu.edu
Office Hours	1700 - 1800 M, T, R Virtually. Google Meeting Link: meet.google.com/jgx-rudy-aod I am available to meet in-person upon email request.
Lab Details	Thursday 0930 - 1215; LUTR 310

Course Objectives

Main Objectives

This course is designed to help build your analytical thinking skills. Specifically, this course will help you to understand the process of collecting (experimental procedure), interpreting (errors and models), and presenting data (writing lab reports).

INW Course Objectives

This class is a laboratory course that is certified to fulfill part of the Investigating the Natural World (INW) requirement in the Liberal Learning Curriculum. The learning objective for INW laboratory courses is:

- **Analyze and Interpret Data in a Graphical, Symbolic, and/or Numeric Format** - You will record what you observe in lab and analyze your data using graphs and the relevant formulas from lecture. These labs will introduce you to methods of collecting and analyzing data. In many instances, you will record what you observe and attempt to explain what you witnessed. There will also be instances in which you will analyze experimental data using pictorial representation (graphs, drawing, etc.)

Course Mechanics

This is a laboratory course which will require you to work with laboratory instruments and computers, interpret the data you collect and provide a report of your activities (the “lab write-up”).

To maintain compliance with the university’s policies on social distancing in classroom and lab environments, labs will be split into two groups. “Group A” students will perform the experiment on the first week of a scheduled lab and “Group B” students will perform it the following week. These groupings will be posted on Scholar prior to the start of the first lab of the semester. **It is your responsibility to know which group you are assigned to.**

The labs will be conducted in Luter 310, unless otherwise stated. The labs for this course will be placed on Scholar. Print out each lab and bring to class. **Handouts will not be provided. Printing out copies in the lab is strictly prohibited.** Printing out the lab in class will result in points deducted from your lab grade for that lab. You may also use your physics textbook as a reference.

To prepare you for the week's lab, there will often be homework assigned which will be **due the night before Group A meets for lab**. If you read the Lab Manual, grading rubric (Both are posted on Scholar) and the week's lab hand-out before coming to lab, you have the greatest chance of doing well on the homework and may save time doing and after the lab.

Course Assignments

Attendance & Professionalism

To get the most out of your laboratory experience, you must be present for the pre-lab lecture which will contain: the theory behind the experiment, an explanation of the experimental procedure, and important safety information. In addition, good scientists know to keep their laboratory in good condition. Arriving late or leaving your lab station in disarray will result in a deduction of one point each from this portion of your grade. **All students must complete all labs to pass this course.**

Pre-lab Homework

Homework will be assigned via WeBWork. This is a free on-line homework system available at <http://ww2.pcs.cnu.edu/>. Select the course and section that you are signed up for. Your log-in and initial password will be your full eight-digit student ID. Please change your password upon your first log-in. **Homework assignments will be posted on Thursday and are due on Wednesday before Group A reports at 9pm.**

Lab Reports

Students will work with their lab partner(s) to complete and submit one lab report for the group. All partners must have their name on the submitted report. All labs will require you to submit a detailed lab report. Specific details of what to include in the report are provided in the "Your Lab Report" section at the end of each lab handout. General information regarding the structure and content of the reports can be found in the example lab report on Scholar. Reports are due one week following the date the lab was completed, at midnight. **Ten percent (10%) will be deducted from the score for each day the lab is late, and the report will not be accepted if more than two (2) days late.**

The purpose of the lab report is to familiarize students with technical writing. Writing is an iterative process with the opportunity to improve from provided feedback. Once lab report grades are posted, students will have the opportunity to revise their reports for up to half credit on all missed points. Revisions can be submitted up to **one week after report grades are posted**. While revisions are not mandatory, I highly encourage students to take advantage of the opportunity.

Grading

I will always make your grades available to you, but it is **your** responsibility to pay attention to your grade as the course progresses. If you find that you are having trouble grasping a concept, do not hesitate to come to my office hours or contact the Center for Academic Success in Tribble Library room 240, phone number (757) 594-7684, <http://tutors.cnu.edu/>.

The scores from the items below will be used to compute your grade:

A	90 – 100	B-	77 – 79	D+	63 – 66
A-	87 – 89	C+	73 – 76	D	60 – 62
B+	83 – 86	C	70 – 72	D-	57 – 59
B	80 – 82	C-	67 – 69	F	< 57

WeBWork Pre-labs	10%
Lab Reports	90%

Lab Policies

Experiment Completion

Participation: There are not always enough stations to provide every student with their own lab, so you may need to break into teams and learn to work effectively with your team. **Your participation in collecting and interpreting your team's data is required. Failure to participate will result in NO credit for the lab.**

Tardiness: Please arrive on time to lab. If you arrive late, you will miss important information during the lecture (which may include instructions on performing the experiment safely), and you will disturb the class. **You may be penalized 10% for arriving late.**

Lab Conduct

Cleanliness: Please be responsible and help keep the labs operating smoothly. Once you are through taking data, return the station to a condition where the next student may begin taking data and remove all trash. **You may be penalized 10% for leaving your lab station in a state of disarray.**

Lab Dress-Code: There is no specific dress-code requirement for the physics labs, however all shoes must be closed-toed. Masks should also be worn securely over the mouth and nose in accordance with the University's COVID-19 policies (See the section on COVID-19 Safety Protocols for more information).

Food and Drink: At no point will food or drink be permitted in the physics labs. This includes reusable water bottles. Please finish or discard all food and drinks before entering the lab.

Distractions: Be respectful of your fellow students so that they can put in the effort required to participate in lab.

Make-Ups

If you must miss an experiment, let me know as soon as possible **before** you will be absent. It may be possible for you to perform the experiment in another lab section during that week. If not, you must schedule a make-up time during the week of the lab. **Make-ups are not possible once the next lab is available.**

Without advance notification of an excused absence, no late lab write-ups will be accepted. The only excused absences are illness, university-sponsored activities communicated before the absence, and extreme emergencies documented and presented to the instructor no later than the end of the following class. Please email me **well before** the due date to make alternate arrangements if you anticipate not being able to participate in an experiment.

University Policies

Academic Honesty

As described in section III of the University Handbook, all members of the Christopher Newport University community uphold and enforce the Honor Code. It is a violation of University Guidelines to commit academic fraud. A student who represents another's work as their own will be severely penalized. This includes submitting any portion of another's work for credit on any assignment. If a student presents someone else's words or ideas without citing those sources, this is called plagiarism.

Consistent with the CNU Honor Code, students who are found to have committed academic fraud on any assignment will receive a failing grade for that assignment and may fail the course. I am also obligated to report all violations to the Director of the Center for Honor Enrichment and Community Standards.

University Statement on Diversity and Inclusion

The Christopher Newport University community engages and respects different viewpoints, understands the cultural and structural context in which those viewpoints emerge, and questions the development of our own perspectives and values, as these are among the fundamental tenets of a liberal arts education.

Accordingly, we affirm our commitment to a campus culture that embraces the full spectrum of human attributes, perspectives, and disciplines, and offers every member of the University the opportunity to become their best self.

Understanding and respecting differences can best develop in a community where members learn, live, work, and serve among individuals with diverse worldviews, identities, and values. We are dedicated to upholding the dignity and worth of all members of this academic community such that all may engage effectively and compassionately in a pluralistic society. If you have specific questions, suggestions or concerns regarding diversity on campus please contact Diversity.Inclusion@CNU.edu

Disabilities

For a student to receive an accommodation for a disability, that disability must be on record in the Office of Student Affairs, 3rd Floor, David Student Union (DSU). If you believe that you have a disability, please contact Jacquelyn Barnes, Student Disability Support Specialist in Student Affairs (594-7160) to discuss your needs.

Students with documented disabilities are to notify the instructor at least seven days prior to the point at which they require an accommodation (the first day of class is recommended), in private, if accommodation is needed. The instructor will provide students with disabilities with the reasonable accommodations approved and directed by the Office of Student Affairs. Work completed before the

student notifies the instructor of his/her disability may be counted toward the final grade at the sole discretion of the instructor.

Success

I want you to succeed in this course and at Christopher Newport. I encourage you to contact me during office hours or to schedule an appointment to discuss course content or to answer questions you have. During the Coronavirus pandemic, our conversations may need to be via electronic means. If I become concerned about your course performance, attendance, engagement, or well-being, I will contact you first. I also may submit a referral through our Captains Care Program. The referral will be received by the Center for Academic Success as well as other departments when appropriate (Counseling Services, Office of Student Engagement). If you are an athlete, the Athletic Academic Support Coordinator will be notified. Someone will contact you to help determine what will help you succeed. Please remember that this is a means for me to support you and help foster your success at Christopher Newport.

Academic Support

The Center for Academic Success offers free tutoring assistance for Christopher Newport students in several academic areas. Center staff offer individual assistance and/or workshops on various study strategies to help you perform your best in your courses. The center also houses the Alice F. Randall Writing Center. Writing consultants can help you at any stage of the writing process, from invention, to development of ideas, to polishing a final draft. The Center is not a proofreading service, but consultants can help you to recognize and find grammar and punctuation errors in your work as well as provide assistance with global tasks. Contact them as early in the writing process as you can!

You may contact the Center for Academic Success to request a tutor, confer with a writing consultant, obtain a schedule of workshops, or make an appointment to talk with a staff member about study skills and strategies. The Center is located in Christopher Newport Hall, first floor, room 123. You may email academicsuccess@cnu.edu or call (757) 594-7684.

Safety Protocols Specific to COVID-19 and Academic Instruction

Offering in-person instruction on campus requires everyone to take individual responsibility for reducing the risk of exposure for all campus community members both inside and outside the classroom. Irresponsible behavior jeopardizes not only your own health, but also that of your fellow students, friends, professors and advisors, and members of our staff. Therefore, you are expected to learn and diligently follow the safety protocols required by the University at all times. The following protocols apply specifically to instructional spaces and academic buildings.

Prior to leaving their residence hall room or home, students should:

- conduct daily health screenings; and
- pack cloth face covering(s), personal cleaning supplies, and related items for campus use.

Students cannot enter instructional spaces or academic buildings if they:

- are experiencing symptoms of any illness, regardless of whether they believe the illness to be COVID-19;
- have been exposed to someone with COVID-19;
- are in isolation while waiting for COVID-19 test results;
- have been directed to quarantine by a University or health department official; or

- have been diagnosed with COVID-19 and have not been approved to return to campus by a healthcare provider.

All students must adhere to the following requirements while inside instructional spaces, common areas and offices:

- attend only the classes and sections in which they are officially enrolled;
- sit in their assigned seats or work at their assigned stations every class period;
- wear a face covering at all times* (face coverings should cover the nose and mouth, be secured under the chin, and fit snugly against the sides of the face);
- use additional personal protective equipment as required for specific classes;
- maintain physical distancing of at least six feet from other people
- disinfect their own work areas upon arrival in and prior to departure from the instructional space;
- refrain from sharing personal materials, such as pens, textbooks, etc., with others;
- refrain from bringing food and drinks into the instructional space;
- follow all directional signs; and
- follow directives regarding office hours and advising appointments.

**Students who have received an exemption from the face covering requirement for health reasons must present the proof of the exemption provided by the Office of Student Affairs to the instructor upon entering the instructional space.*

Because non-compliance potentially endangers others, faculty members:

- are authorized to instruct anyone in non-compliance with safety protocols to correct the non-compliance or immediately leave the instructional space; and
- may submit referrals to CHECS to report non-compliance with safety protocols.

Faculty should immediately notify the Vice President for Student Affairs, Kevin Hughes (dosa@cnu.edu or kmhughes@cnu.edu), if they become aware of a student who has sought a diagnostic test or who has been exposed. In addition, faculty members may submit referrals through the Captain's Care Program to report absences as a way of identifying students who may have become ill. It would be appropriate to do so when students have not attended class or communicated with the faculty member in any way for a period of one week or longer.

Course Materials

All content created and assembled by the faculty member and used in this course is to be considered intellectual property owned by the faculty member and Christopher Newport University. It is provided solely for the private use of the students currently enrolled in this course. To ensure the free and open discussion of ideas, students may not make available any of the original course content, including but not limited to lectures, discussions, videos, handouts, and/or activities, to anyone not currently enrolled in the course without the advance written permission of the instructor. This means that students may not record, download, screenshot, or in any way copy original course material for the purpose of distribution beyond this course. A violation may be considered theft. It is the student's responsibility to protect course material when accessing it outside of the physical classroom space.